Final 11/20/92

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V
SITE SAFETY PLAN

Date: January 03, 1995

Project Name: MCC Construction
2100 South Kostner
Chicago, Illinois

ERCS Delivery Order #:

TAT Technical Direction Document #: T05-9412-008

U.S. EPA Site I.D.#: 0.D.

ERCS Job #:

Adopted By: _____ Date: 1/4/95
ERCS Response Manager

Adopted By: _____ Date: 1/4/95
E & E Lead TAT Member

Adopted By: _____ Date: 1-4-95
U.S. EPA On-Scene Coordinator

Adopted By: _____ Date: 1/4/95
ERCS Safety Manager

Adopted By: _____ Date: 1/4/95
E & E Safety Officer

TABLE OF CONTENTS

TABLE OF CONTENTS (cont'd)

MANDATORY ATTACHMENTS

- ATTACHMENT A SITE SAFETY PLAN AMENDMENTS
- ATTACHMENT B SITE MAPS
- ATTACHMENT C CHEMICAL HAZARD INFORMATION
- ATTACHMENT D PERSONAL PROTECTION EQUIPMENT AND RESPIRATORY PROTECTION SOP'S
- ATTACHMENT E DRUG AND ALCOHOL PROCEDURES
- ATTACHMENT F ACCIDENT REPORTING/INVESTIGATION
- ATTACHMENT Z SITE SAFETY PLAN ACKNOWLEDGMENT FORM

OPTIONAL ATTACHMENTS HAZARDS AND SOPS ASSOCIATED WITH:

G OSHA Guidance and Regulations
H Confined Space
I Drum Handling
J Drum Sampling
K Opening Drums and Overpacks
L Drum Staging and Overpacking
___ Drum Excavation
M Empty Drum Crushing
___ Drill Rig
N Site Walkthroughs/Entry
___ Housekeeping and Material Storage
O Hazardous Waste Storage
___ Demolition
P Working Around Heavy Equipment
Q General Heavy Equipment Operations

OPTIONAL ATTACHMENTS (cont'd)
HAZARDS AND SOPS ASSOCIATED WITH:

___ Excavation

_R_ Truck Loading

___ Soil Sampling

_S_ Liquid Sampling

_T_ Compatibility Testing and Compositing of Samples

___ Lab Packing and Lab Inventory

_U_ Flammable/Combustible Liquid Transfer

___ Corrosive Liquid Transfer

___ Use of High Pressure Water Cleanup

___ Use of a High Pressure Water Cleaner in Vats

___ Compressed Gas Cylinders

___ Heat Stress

_V_ Cold Stress

___ Electrical Safety

___ Traffic Control

___ Fire Prevention and Protection

___ Work from Elevated Surfaces

___ Cranes

___ Rigging

___ Lockout/Tagout

___ Welding/Cutting/Grinding

___ Other: _____

_____

_____

GLOSSARY OF ACRONYMS

ANSI	- AMERICAN NATIONAL STANDARDS INSTITUTE
APR	- AIR PURIFYING RESPIRATOR
ACGIH	- AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
CFR	- CODE OF FEDERAL REGULATIONS
CGI	- COMBUSTIBLE GAS INDICATOR
CLEAN ZONE	- SUPPORT ZONE
CSEP	- CONFINED SPACE ENTRY PERMIT
DECON	- DECONTAMINATION
ERCS	- EMERGENCY RESPONSE CLEAN-UP SERVICES
HNU-PID	- HNU PHOTOIONIZATION DETECTOR
HOT ZONE	- EXCLUSION ZONE
IAW	- IN ACCORDANCE WITH
IDLH	- IMMEDIATELY DANGEROUS TO LIFE & HEALTH
MREM/hr	- MILLI-ROENTGENS EQUIVALENT IN MAN PER HOUR
NIOSH	- NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY & HEALTH
OSC	- ON-SCENE COORDINATOR
OSHA	- OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION LIMIT
OVA	- ORGANIC VAPOR ANALYZER
PAPR	- POWERED AIR PURIFYING RESPIRATORS
PEL	- PERMISSIBLE EXPOSURE LIMIT
PPM	- PARTS PER MILLION
RES	- RIEDEL ENVIRONMENTAL SERVICES, INC.
RM	- RESPONSE MANAGER
SCBA	- SELF-CONTAINED BREATHING APPARATUS
SOP	- STANDARD OPERATING PROCEDURE
SPCC	- SPILL PREVENTION CONTROLS & COUNTERMEASURES
TAT	- TECHNICAL ASSISTANCE TEAM
TLV	- THRESHOLD LIMIT VALUE
TWA	- TIME WEIGHTED AVERAGE
U.S. EPA	- U.S. ENVIRONMENTAL PROTECTION AGENCY

INTRODUCTION AND SITE ENTRY REQUIREMENTS

This document describes the health and safety guidelines developed for the **MCC Construction Site** site, to protect on-site personnel, visitors, and the public from physical harm and exposure to hazardous materials or wastes. The procedures and guidelines contained herein were based upon the best available information at the time of the plan's preparation. Specific requirements will be revised when new information is received or conditions change. A written amendment will document all changes made to the plan. Any amendments to this plan will be included in Attachment A. Where appropriate, specific OSHA standards or other guidance will be cited and applied.

All work practices and procedures implemented on-site must be designated to minimize worker contact with hazardous materials and to reduce the possibility of physical injury. All work will be performed in accordance with applicable Federal 29CFR 1910 and 1926 Health and Safety Regulations and the Federal 29CFR 1910.120 Hazardous Waste Site Safety Regulations. The States of Indiana, Michigan and Minnesota are State OSHA states and their regulations will be followed as applicable.

DAILY SAFETY MEETINGS

Daily safety meetings will be held at the start of each shift to ensure that all personnel understand site conditions and operating procedures, to ensure that personal protective equipment is being used correctly and to address worker health and safety concerns.

SITE SAFETY PLAN ACCEPTANCE ACKNOWLEDGMENT

The OSC or designated representative shall be responsible for informing all individuals entering the exclusion zone or decontamination zone of the contents of this plan and ensuring that each person signs the Safety Plan Acknowledgment Form in Attachment Z. By signing the Safety Plan Acknowledgment Form, individuals are recognizing the potential hazards present on-site and the policies and procedures required to minimize exposure or adverse effects of these hazards.

1.0 SITE BACKGROUND AND SCOPE OF WORK

1.1 ROLES AND RESPONSIBILITIES

On-Scene Coordinator (OSC):

The OSC, as the representative of the U.S. EPA, is responsible for overall project administration and for coordinating health and safety standards for all individuals on-site at all times. All U.S. EPA and contractors health and safety guidelines and requirements as well as all applicable OSHA standards shall be applied. The OSC is the overall site safety officer and will be responsible for the health and safety of on-site visitors. However, each contractor (as an employer under OSHA) is also responsible for the health and safety of its employees. If there is any dispute with regards to health and safety, the following procedures shall be followed:

1) Attempt to resolve the issue on-site; and,
2) If the issue cannot be resolved, on-site personnel shall consult off-site health and safety personnel for assistance and the specific task operation in dispute shall be discontinued until the issue is resolved.

Response Manager (RM):

The Response Manager, as the field representative for the ERCS clean-up contractor, has the responsibility for fulfilling the terms of the delivery order. The RM must oversee the project and ensure that all technical, regulatory and safety requirements are met. It is the RM's responsibility to communicate with the OSC as frequently as dictated by the OSC, but at least daily, regarding site clean-up progress and any problems encountered.

Technical Assistance Team (TAT):

The Technical Assistance Team is responsible for providing the OSC with assistance and support in regards to all technical, regulatory and safety aspects of site activity. The TAT is also available to advise the OSC on matters relating to sampling, treatment, packaging, labeling, compatibility, transport, and disposal of hazardous materials, but is not limited to the above-mentioned.

Site Health and Safety Officer (HSO):

The ERCS and TAT Site Safety Officers will be assigned to the site on a full-time basis with functional responsibility for implementing the Site Health and Safety Plan as it applies to ERCS and TAT personnel. The Response Manager is the designated ERCS HSO. The Lead TAT Member is the designated TAT HSO unless otherwise appointed. Site audits may be conducted by the ERCS Health and Safety manager, TAT personnel and/or the U.S. EPA.

Specific Duties Include:

a. Assume responsibility for health and safety of ERCS and/or TAT personnel.
b. Supervise confined space entries.
c. Document safety problems.
d. Supervise decontamination of personnel and equipment.
e. Ensure that monitoring equipment is calibrated/operational.
f. Conduct personal air monitoring on all ERCS and/or TAT employees as outlined in 29CFR 1910.120(h)(4).
g. Perform respiratory fit tests.
h. Inventory/inspect PPE prior to personnel entries.
i. Prepare summary letter of personal air sampling results.
j. Select protective equipment levels based upon chemical properties, method of contact and air sample results.
k. Prepare and maintain OSHA Log within 3 days of accident.
l. Insure all ERCS and/or TAT personnel are fit for duty.
m. Competent person for excavation/trench entry jobs.
n. Inspect first aid kits/fire extinguishers/SCBA.

Other:

Any persons who observe safety problems should immediately report observations/concerns to appropriate key personnel listed in Section 1.2.

1.2 Key Personnel

U.S. EPA On-Scene Coordinator (OSC)/ Site Safety Officer:	Brad Stimple U.S EPA - Region V 77 West Jackson Blvd Chicago, Illinois 60604
Alternate OSCs:	_____
Principle ERCS Contractor:	Riedel Environmental Services Bensenville, Illinois (708) 238-1818
Response Manager (RM):	Mark Parquette - RES Chicago
Subcontractors:	None
ERCS Health & Safety Officer:	Alan Frank
TAT Health & Safety Officer:	Karen Rydzewski
Technical Assistance Team (TAT):	Ecology & Environment, Inc. 111 West Jackson Blvd. Chicago, Illinois 60604 312/663-9415
TAT Representatives:	Karen Rydzewski Donovan Robin

1.3 Site Background

The MCC Construction (MCC) Site is a parcel of land previously operated by a construction company. Currently the site is utilized illegally as an open dump. Approximately 22 drums containing paint waste paint have been abandoned at the site. Nineteen of the 22 drums are scattered in the southeast portion of the property. The remaining three drums are located in a semi-trailer on the northeast portion of the site. Construction debris including, metal, wood, concrete, etc. is scattered throughout the entire site. A perimeter fence surrounds the property.

The U.S. EPA and TAT conducted a site assessment at the MCC site in November 1994, and collected drum samples. Analytical results revealed the material in the drums contain elevated of methyl ethyl ketone, toluene, ethyl benzene, xylene, acetone, naphthalene, and lead. In addition, all three drum samples collected exhibited flashpoints below the RCRA regulatory limit for ignitibility of 140°F. A sample was also collected from a construction/debris pile located on site. No elevated concentrations of hazardous constituents were detected.

1.4 Scope of Work for ERCS Contractor

1. Prepare and implement a Site Health and Safety Plan.
2. Drum inspection and inventory
2. Conduct drum sampling, overpacking, and staging.
3. Assist with hazardous categorization testing of drum samples.
4. Subcontract transportation and disposal of 22 drums.
5. Complete drum sampling logs.

1.5 Scope of Work for TAT

1. Prepare and implement a Site Health and Safety Plan.
2. Conduct oversight of on-site activities and U.S. EPA contractors.
3. Conduct hazardous categorization and compatibility/bulk testing on drum samples.
4. Assit with drum sampling.
5. Maintain CERCLA paperwork.
6. Conduct air monitoring during on-site activities.
7. Prepare draft After-action Report.

2.0 TASK SAFETY AND HEALTH RISK ANALYSIS

2.1 Task Specific Hazards and Controls

This section is to be addressed in the daily tool box safety meeting as each task is to be attempted. Each Task-Specific Safety Assessment is designed to develop awareness to chemical and physical hazards specific to each task. It would be impractical to repeat in complete detail each control measure and SOP for each job task. Sources and Hazards will be addressed for each job task with reference made to applicable control measures in Sections 2.2, 2.3 and SOP's. The tables in Section 2.2 and 2.3 should be posted in the break area and command post. When the Task-Specific Safety Assessment are discussed additional hazards may need to be addressed.

TASK SPECIFIC SAFETY ASSESSMENT

JOB TASK: Site walkthrough and air monitoring

PERSONAL PROTECTIVE EQUIPMENT: Level C/D

HAZARD	SOURCES	CONTROL MEASURES	REF.
Slip, trip, fall	Scattered debris, terrain		
Cold Stress	Weather		
Biological			

TASK SPECIFIC SAFETY ASSESSMENT

JOB TASK: Drum overpacking and staging

PERSONAL PROTECTIVE EQUIPMENT: Level B/C/D

HAZARD	SOURCES	CONTROL MEASURES	REF.
Drum handling	Drums	Watch for pinch points. Use mechanical devices whenever possible.	
Contaminant exposure	Drum contents	wear appropriate PPE. Monitor work areas for organic vapors and LEL	
		Downgrading to modified level D is permitted if air monitoring is $\leq$ BKGND	

TASK SPECIFIC SAFETY ASSESSMENT

JOB TASK: Drum Opening & Sampling

PERSONAL PROTECTIVE EQUIPMENT: Level B

HAZARD	SOURCES	CONTROL MEASURES	REF.
Contaminant exposure	Drum Contents	Proper PPE. Avoid contact w/ liquids. Inspect breathing equipment prior to use (cold weather may restrict the equipment). Have spill controls readily available.	
Flammable Atmosphere	Drum Contents	Use sparkproof tools. Monitor work area for % LEL periodically. Use caution around bulging drums. Use mechanical equipment to depressurize, if necessary.	
Cold Stress	Weather Conditions	Take heated breaks as necessary. Wear layered clothing.	
Drum Handling	Drums & Handling Equipment	Beware of pinch points. Use mechanical devices during handling. Wear proper PPE. Stay upwind during sampling procedures.	

TASK SPECIFIC SAFETY ASSESSMENT

JOB TASK: Hazardous categorization and bulk testing

PERSONAL PROTECTIVE EQUIPMENT: Level D with fume hoods

HAZARD	SOURCES	CONTROL MEASURES	REF.
Contaminant Explosure	drum contents	Wear proper PPE and have spill control readily available. Have HAZCATing procedures performed under a fume hood.	

TASK SPECIFIC SAFETY ASSESSMENT

JOB TASK: Site Preparation

PERSONAL PROTECTIVE EQUIPMENT: Level D Modified

HAZARD	SOURCES	CONTROL MEASURES	REF.
Heavy Lifting	Unloading Equipment and moving debris	Utilize the Buddy system & work in teams. No individuals lifting > 75 lbs	
Trip & Fall	Site Debris	Clear debris in work areas. Use caution while walking, wear proper PPE.	
Contaminant Exposure	Debris	Wear proper PPE. Watch sharp edges and wear leather gloves if possible to minimize punctures and cuts.	

TASK SPECIFIC SAFETY ASSESSMENT

JOB TASK: Drum Inspection and Overpacking

PERSONAL PROTECTIVE EQUIPMENT: Level B/C PPE

HAZARD	SOURCES	CONTROL MEASURES	REF.
Contaminant Exposure	Drum Contents	Wear Proper PPE, If drums are to be handled, have spill controls readily available. Perform air monitoring during handling and upgrade if necessary.	
Drum Handling	Drums & Handling Equipment	Beware of pinch points, buddy system	
Slip/Trip/Fall	Uneven terrain, Ice, and Snow	Keep work area clear of unnecessary debris and organize area.	
Spill Control	Drums	Have spill control equipment readily available.	

TASK SPECIFIC SAFETY ASSESSMENT

JOB TASK:			
PERSONAL PROTECTIVE EQUIPMENT:			
HAZARD	**SOURCES**	**CONTROL MEASURES**	**REF.**

TASK SPECIFIC SAFETY ASSESSMENT

JOB TASK:			
PERSONAL PROTECTIVE EQUIPMENT:			
HAZARD	**SOURCES**	**CONTROL MEASURES**	**REF.**

2.2 Chemical Hazards

CHEMICAL	TLV/PEL/ IDLH	Physical Characteristics	Odor Threshold	Routes of Exposure	PPE Polymers	Symptoms Acute/Chronic	First Aid
Lead	0.1 mg/m3 700 mg/m3	Metal, soft grayish solid	na	Inhal, Ing, Contact		Weak,lass, insom, abdom pain	Eye-Irr immed Skin-Soap flush
Methyl Ethyl Ketone	200 ppm 3000 ppm	Clear liquid	Mint acetone like odor	Inhal, Ing, Contact		Irrit eye, nose, thrt & hdaches, vomit	Eye-Irr immed Skin-Soap wash Breath-Med att: Swallow-Med att
Ethyl benzene	100 ppm 2000 ppm	Colorless liq.	aromatic odor	Inhal, Ing, Contact		Irrit eye, nose, thrt, hdaches, vmt	Eye-Irr immed Skin-Soap wash Breath-Med att: Swallow-Med att
Toluene	100 ppm 2000 ppm	Colorless liq.	aromatic odor	Inhal, Ing, Contact		Irrit eye, nose, thrt, hdaches, vmt	Eye-Irr immed Skin-Soap wash Breath-Med att: Swallow-Med att
Xylene	100 ppm 2000 ppm	Colorless liq.	aromatic odor	Inhal, Ing, Contact		Irrit eye, nose, thrt, hdaches, vmt	Eye-Irr immed Skin-Soap wash Breath-Med att: Swallow-Med att

Acetone	100 ppm 2000 ppm	Colorless liq.	aromatic odor	Inhal, Ing, Contact		Irrit eye, nose, thrt, hdaches, vmt	Eye-Irr immed Skin-Soap wash Breath-Med att: Swallow-Med att
Naphthalene	10 ppm 500 ppm	Colorless to brown solid	mothball odor	Inhal, Ing, Contact		Eye Irrit, head, conf.,excitement mal, nau, vmt, abdom pain, irrit bladder,	Eye-Irr immed Skin-flush Swallow- Med att:
Barium	0.5 mg/m3 1100 mg/m3	White Solid	na	Inhal, Ing, Contact		upper resp irrit, gastroint., mucs, spasm, slow pulse, skin burns	Eye-Irr immed Skin- Wash immed
Chromium	1 mg/m3 N.E.	blue-white to steel gray	na	Inhal, Ing,		Histologic fibrosis lungs	Eye- Irr immed Skin-Wash
Bis(2-ethylhexyl) phthalate	≤ 5 mg/m^3 IDLH unk (ca)	COLORLESS OILY LIQUID		INHAL, INJ, CONTACT		IRRIT EYES + MUCOUS MEMB.	EYE IRR IMMED. RESP SUPPORT.
Di-n-butyl phthalate							

The above listing should not be taken as a complete assessment of the hazards posed by materials at MCC Site. The known and unknown mixed chemical hazards at this site prevent a clear determination of the specific effects of discrete compounds. Therefore, personnel must be alert for symptoms of possible exposure such as unusual smells, stinging, burning eyes, nose and throat, skin irritation, as well as feeling extremely well, depressed, sleepy or tired. Symptoms must be immediately reported to the site supervisor.
See Attachment C for Chemical Hazard Information and MSDS'.

2.3 Physical Hazards

PHYSICAL/ENVIRONMENTAL HAZARD ANALYSIS

HAZARD	PRE PLANNING TO CONTROL HAZARD	ACTIVE CONTROL MEASURES
Cold Stress	1. Anticipate possible low temperatures (winter months). 2. Remember the temperature does not have to be below freezing to have a cold stress situation.	1. Warm break area. 2. Warm decaffeinated drinks. 3. Buddy system/awareness. 4. First aid on site. 5. Medical care if symptoms persist.
Electrical	1. Locate and mark existing energized lines. 2. De-energize lines if necessary to perform work safely. 3. All electrical circuits will be grounded. 4. All 120 volt single phase which are not a part of the permanent wiring will have a ground-fault interrupter in place. 5. Temporary wiring will be guarded, buried or isolated by elevation to prevent accidental contact by personnel or equipment. 6. Evaluate potential for high moisture/standing water areas and define special electrical wiring needs-typically requirement for low voltage lighting systems.	
Ergonomic	1. All operations evaluated for ergonomic impact. 2. Procedures written to define limits of lifting, pulling, etc. 3. Procedures to define how personnel will utilize proper ergonomic concepts and utilize mechanical material handling equipment. 4. Necessary mechanical material handling equipment specified and ordered for project.	1. Proper body mechanics techniques stressed and enforced on a daily basis. 2. Mechanical handling equipment maintained and utilized. 3. Proper body mechanics stressed in scheduled safety meetings. 4. Injuries reported and medically treated if in doubt about severity. 5. Operations changed as necessary based on injury experience or potential.

PHYSICAL/ENVIRONMENTAL HAZARD ANALYSIS

HAZARD	PRE PLANNING TO CONTROL HAZARD	ACTIVE CONTROL MEASURES
Existing Site Topography	1. Survey site prior to layout. Identify areas unsafe for personnel or equipment due to physical conditions. 2. Identify/locate existing utilities. 3. Determine impact of site operations on surrounding properties, communities, etc. 4. Identify mechanized equipment routes both on site and onto and off the site. 5. Layout site into exclusion and contamination reduction zones based on initial site evaluation.	1. Awareness to work environment - regular inspection/audits to identify changing conditions. 2. Shut down operations when unknown conditions encountered.
Fires & Explosions	1. Evaluate all operations for fire and explosion potential. 2. Define specific procedures for unique operations presenting unusual hazard such as flammable tank demolition. 3. Ensure that properly trained personnel and specialized equipment is available. 4. Define requirements for handling and storage of flammable liquids on site, need for hot work permits and procedures to follow in the event of fire or explosion. 5. Define the type and quantity of fire suppression equipment needed on site. 6. Coordinate which local fire fighting agencies to discuss unique fire hazards, hazardous materials, etc. 7. Ensure site operations comply with 29CFR 1910.157G.	1. Inspect fire suppression equipment on a regular basis. 2. Store flammables away from oxidizers and corrosives. 3. Utilize Hot Work Permit for all hot work on site. 4. Follow any site specific procedures regarding work around flammables. 5. Review and practice contingency plans. Discuss on regular basis at scheduled safety meetings.

PHYSICAL/ENVIRONMENTAL HAZARD ANALYSIS

HAZARD	PRE PLANNING TO CONTROL HAZARD	ACTIVE CONTROL MEASURES
Flammable Vapor and Gases	1. Evaluate site to determine sources of likely flammable gas or vapor generation. 2. Develop specific procedures to be followed in the event of exposure to flammables. 3. Specify specialized equipment needs for inerting flammable atmospheres, ventilating spaces and monitoring flammable vapor concentrations. 4. Define requirements for intrinsically safe equipment. 5. Develop contingency plan to follow in the event of fire or explosion.	1. Calibrated monitoring equipment available and utilized by trained personnel whenever working where flammable gas or vapor is present. 2. Monitoring performed at regular frequency and in all areas where vapor could generate or pool. 3. Equipment and operations shut down when threshold levels are exceeded. 4. Contingency plans reviewed regularly by all involved personnel. 5. Work areas are carefully inspected to look for possible ignition sources. Sources are removed. 6. Operations shut down if specific task procedures can't be followed to the letter.
Heat Stress	1. Anticipate possible elevated temperatures (summer months). 2. Awareness to stress placed on body by specific PPE. 3. Awareness to levels of heat stress symptoms.	1. Proper work/rest schedule and monitoring. 2. Drink plenty of fluids. 3. Buddy system/awareness. 4. First aid on site. 5. Medical care if symptoms persist.
Heavy Equipment Operation	1. Define equipment routes and traffic patterns for site. 2. Insure that operators are properly trained on equipment operation for all equipment required on project. 3. Define safety equipment requirements, including back up alarm and roll over, for all equipment on site. 4. Define equipment routes and traffic patterns for site. 5. Implement SOP of requiring operators to safety inspect equipment on a daily basis in accordance with manufacturer requirements. 6. Evaluate project requirements to ensure that equipment of adequate capacity is specified.	1. Equipment inspected as required. Equipment repaired or taken out of service. 2. Ground spotters are assigned to work with equipment operators. Utilize standard hand signals and communication protocols. 3. Personnel wear the proper PPE, utilize hearing protection, gloves for handling rigging, etc. 4. Equipment safety procedures discussed at daily scheduled safety meetings. 5. Personnel do not exceed lifting capacities, load limits, etc. for equipment in question. 6. Personnel follow basic SOP's which prohibit passengers on equipment, activating brakes and grounding buckets, securing loads prior to movement, etc.

PHYSICAL/ENVIRONMENTAL HAZARD ANALYSIS

HAZARD	PRE PLANNING TO CONTROL HAZARD	ACTIVE CONTROL MEASURES
Illumination	1. Evaluate all operations and work areas to determine lighting requirements. 2. Specify specialized lighting requirements including explosion proof, intrinsically safe, lighting needs. 3. Determine if nighttime outdoor operations are necessary. Evaluate tasks to be performed and number of light plants necessary to allow operations. 4. Ascertain if outdoor lighting from nighttime operations will have an impact on surrounding communities.	1. Inspect specialized equipment and discard or replace as needed. 2. Add additional lighting to areas with lighting deficiencies. 3. Inspect drop cords and portable lights on regular basis. Replace or repair as necessary.
Noise	1. Local community noise standards examined. 2. Expected loud operations evaluated to determine compliance with community standards. 3. Loud operations scheduled for approved time periods. 4. Noise level standards established for equipment brought onto site. 5. Hearing protection requirements defined for personnel expected to have excessive exposures.	1. Personnel receive annual audiogram. 2. Personnel required to wear hearing protection. 3. Routine noise level monitoring and dosimetry performed. 4. Defective equipment repaired as needed. 5. Ongoing hearing conservation education promoted at scheduled safety meetings. 6. Medical evaluation following noise (impact) exposure if symptoms present themselves.
Personal Injuries	1. Site operations will be evaluated for exposures with serious injury potential such as falling objects, pinch points, flying objects, falls from elevated surfaces, etc. 2. A written Fall Prevention Program will be developed if workers will be required to work at heights greater than 10 feet from unguarded work locations. 3. PPE requirements will be based on potential for injury.	1. Personnel will wear required PPE. 2. Specialized equipment such as rope grabs, winches, etc. will be inspected prior to each use. Defective equipment will be immediately replaced. 3. All injury and near miss incidents will be reported to the HSO. 4. First aid/CPR trained person on site at all times. 5. All injuries will be treated on site with advanced medical treatment being sought if doubt about severity.
Radiation	1. Evaluate potential for exposure to radioactive materials. 2. If likely, develop specialized training program for personnel. 3. Develop plan and specify equipment for monitoring potential radiation sources. 4. Establish health physics dosimetry program. 5. If not likely, implement SOP of stopping work should any sign of radioactive materials become apparent.	1. Perform monitoring as defined in safety plan. 2. Perform necessary calibration and maintenance on monitoring equipment. 3. Employees participate in health physics monitoring program. 4. Notify Project Manager when suspect materials are detected.

PHYSICAL/ENVIRONMENTAL HAZARD ANALYSIS

HAZARD	PRE PLANNING TO CONTROL HAZARD	ACTIVE CONTROL MEASURES
Small Equipment Usage	1. Site operations evaluated to determine need for specialized intrinsically safe, explosion-proof and UL approved equipment and instruments. 2. Implement requirement for G.F.I., double insulated tool usage, or assured grounding program in all outdoor operations, will be utilized. 3. Specify equipment needs to ensure that equipment used only for the purpose for which it is designed and to prevent abuse or misuse of the equipment. 4. Specify requirements for the inspections and maintenance of specialized equipment. 5. Specify that all equipment utilized on the project meets all OSHA requirements.	1. First aid on site. 2. Transport for medical care if necessary.
Wildlife	1. Inspect work environment where tasks are being performed. 2. Awareness to bites. 3. Dogs, animals, poison ivy, etc.	1. First aid on site. 2. Seek medical attention if symptoms-signs persist.
Trenching and Excavation	1. Implement ERCS/TAT/EPA excavation procedures if entry required into any excavation greater than 4 feet depth. 2. Specify that Competent Person(s) assigned to project be present at all times personnel inside trench(s). 3. Specify that a Professional Engineer design specialized shoring systems for those that are extremely deep. 4. Specify special PPE and monitoring requirements for excavations in soils contaminated with hazardous materials or gases and vapors. 5. Ensure excavations comply with 29CFR 1926, Subpart P.	1. Competent person in the immediate area at all times that personnel are required to enter trenches. 2. Operations shut down if the excavation shows any sign of cave in, excessive water, unacceptable levels of toxic contaminants, changing weather, or shoring systems have visible defects. 3. Equipment operators keep all personnel inside excavation in sight. No suspended loads or movement of buckets over personnel. 4. Regular monitoring is performed in excavations where toxic gases or vapors are possible.

PHYSICAL/ENVIRONMENTAL HAZARD ANALYSIS

HAZARD	PRE PLANNING TO CONTROL HAZARD	ACTIVE CONTROL MEASURES
Weather Conditions	1. Evaluate prevailing weather conditions for the site. 2. Contingency plans developed for likely severe weather conditions such as tornado, and extreme thunderstorm. 3. Provide for daily weather forecast service in extreme weather areas. 4. Plan to weatherize safety systems, such as showers and eye washes, that would be impacted by extreme cold weather. 5. Order necessary specialized cold weather clothing. 6. Grounding and bonding requirements defined for thunderstorm areas. 7. Sheltered air conditioned break areas provided for extreme hot and cold weather zones.	1. Employees trained in contingency plan for severe weather conditions. 2. Emergency water sources inspected regularly in cold areas. 3. Weather service contacted regularly during storm conditions. 4. Supervisory personnel cease operations during extreme storm conditions (i.e., first scenes of thunderstorms). Personnel evacuate to safe assembly area.

3.0 PERSONNEL TRAINING

[1] Initial Training

a. 40 Hour Training

All field employees receive forty hours of classroom training on safe work practices and hazardous waste sites.

b. Supervisor/Managers

Manager and Supervisors receive eight hours of training on safe management of hazardous waste sites. All training complies with 29CFR 1910.120.

The following individuals are Site Supervisors:

[1] Mark Douglas - RES
[2] _____

[2] Site Specific Training

a. All assigned personnel will receive site specific training on routes of exposure and adverse health effects associated with the chemicals listed on the attachment.

b. At least one member of each work crew shall have training in the use of portable fire extinguishers in accordance with 29CFR 1910.157G.

c. IAW 29CFR 1910.120, all personnel newly assigned to hazardous waste work will receive 3 days of on the job training by an experienced supervisor. This typically is achieved by coordinating the work schedule so that they perform 25% of the expected workload the first day; 50% the second day, and 75% the third day.

d. Each person entering the site shall sign a statement attesting to the fact that they have read and understand the Site Specific Safety Plan. (Attachment Z)

[3] Annual Refresher

All field employees receive eight hours of refresher training on the above topics within the anniversary date of their initial 40 hour class.

[4] First Aid/CPR

All field employees receive initial and recertification training. Treatment limited to Good Samaritan/minor first aid. All traumatic/major first aid, and cardiac problems will be referred to medical facilities.

[5] Subcontractor Requirements

All subcontractors entering the contamination reduction zone and exclusion zone will have adequate training satisfying 29 CFR 1910.120.

4.0 PERSONAL PROTECTIVE EQUIPMENT

The following is a brief description of the personal protective equipment which may be required during various phases of the project. The U.S. EPA terminology for protective equipment will be used; Levels A, B, C and D.

Respiratory protective equipment shall be NIOSH-approved and use shall conform to OSHA 29 CFR Part 1910.134 Requirements. Each employer shall maintain a written respirator program detailing selection, use, cleaning, maintenance and storage of respiratory protective equipment. The written Respirator Program will be maintained at the local and regional offices.

4.1 Level A Protection Shall Be Used When:

- The extremely hazardous substance requires the highest level of protection for skin, eyes and the respiratory system;
- Substances with a high degree of hazard to the skin are known or suspected;
- Chemical concentrations are known to be above IDLH levels; or,
- Biological hazards requiring Level A are known or suspected.

4.1.1 Level A Protective Equipment at a Minimum Shall Consist of:

Specific protective equipment for each level of protection is as follows:

Protective Gear - Level A (Check and list required type)

Supplied Air _____
5-minute Egress _____
Spare Air Tanks _____
Encapsulated Suit (type) _____
Inner Gloves (type) _____
Boot Covers (booties) _____
Outer Chemical Gloves (type _____
Outer Work Gloves (type) _____
Safety Shoes/Boots (type) _____
Hard Hat _____
Respiratory Inserts _____
Other (List_____) _____
Other (List_____) _____
Other (List_____) _____
Other (List_____) _____
Other (List_____) _____
Modifications: Level A work not anticipated at this site. _____

4.2 Level B Protection Shall Be Used When:

- The substance(s) has been identified and requires a high level of respiratory protection but less skin protection;
- Concentrations of chemicals in the air are IDLH or above the maximum use limit of an APR with full-face mask;
- Oxygen deficient or potentially oxygen deficient atmospheres (< 19.5%) are possible; and/or,
- Confined space entry may require Level B.
- Incomplete identification of gases and vapors, but not suspected to be harmful to skin or skin absorbable.

4.2.1 Level B Protective Equipment at a Minimum Shall Consist of:

Protective Gear - Level B	(Check and list required type)
Supplied Air	Fullface SCBA or Airline
5-minute Egress	used with airline
Chemical Resistant/Protective Coveralls	Saranex
Full Body Apron or Others (type)	na
Inner Gloves (type)	Latex Surgical
Outer Chemical Gloves (type)	Silver Shield
Outer Work Gloves (type)	Nitrile
Safety Shoes/Boots (type)	Steel toe chemical resistant
Boot Covers (booties)	Optional
Hard Hat	Required
Respiratory Inserts	Optional
Other (List_____)	
Other (List_____)	
Other (List_____)	
Other (List_____)	
Other (List_____)	

Modifications:_____

NOTE: Use of Level B personal protective equipment requires that one (1) person must be available as backup ready to provide emergency assistance.

4.3 Level C Protection Shall Be Used When:

- The same level of skin protection as Level B, but a lower level of respiratory protection is required;
- The types of air contaminants have been identified, concentrations measured, and an air-purifying respirator is available that can remove contaminants; or,
- The substance has adequate warning properties and all criteria for the use of APR respirators has been met.

4.3.1 Level C Protective Equipment at a Minimum Shall Consist of:

Protective Gear - Level C	(Check and list required type)
MSA Air Purifying Respirator or PAPR	Fullface APR
Cartridges (type)	GMC-H
Escape Mask	N/A
Chemical Resistant/Protective Coveralls	Saranex
Full Body Apron or Other (type)	N/A
Inner Gloves (type)	Latex surgical
Outer Chemical Gloves (type)	silver shield
Outer Work Gloves (type)	nitrile
Safety Shoes/Boots (type)	required
Hard Hat	required
Respiratory Inserts	optional
Other (List_____)	
Other (List_____)	
Other (List_____)	
Other (List_____)	
Other (List_____)	

Modifications:_____

4.4 Level D Protection Shall Be Used When:

- The atmosphere contains no known hazard; and,
- Work functions preclude splashes, immersion or the potential for unexpected inhalation of, or contact with, hazardous concentrations of harmful chemicals.

4.4.1 Level D Protection Equipment at a Minimum Shall Consist of:

Protective Gear - Level D	(Check and list required type)
Chemical Resistant/Protective Coveralls	
Rain Suit	
Safety Shoes/Boots (type)	
Boot Covers (booties)	
Work Gloves (type)	
Hard Hat	
Face Shield	
Safety Glasses	

Modifications:_____

Specific operating procedures for PPE and Respiratory Protection are in Attachment D.

4.5 Decisions to Upgrade/Downgrade PPE

[1] All decisions to downgrade from Level B to C or D must be accompanied by air monitoring results. The Regional Safety Managers (ERCS, TAT) must be advised of on-site decisions to downgrade. All decisions must be documented with an Addendum to the Plan.

[2] The following conditions will necessitate reevaluation of PPE use.

a. commencement of a new work not previously identified
b. change of job tasks during a work phase
c. change of season/weather
d. contaminants other than those identified in Safety Plan
e. change in ambient levels of contaminants
f. change in work which affects degree of chemical contact

[3] Action Levels (See Section 6.0)

5.0 MEDICAL SURVEILLANCE

5.1 Pre-Employment Physical

a. Pre-employment and periodic update medical examinations are required for persons working at hazardous waste sites.
b. All physicals must be completed and documented prior to assignment to this site.
c. All physical exams will be conducted following parameters established by the respective employee's Corporate Physicians.

5.2 Site Specific Physical Examination

a. _____
b. _____
c. A current fitness for duty statement will be kept on site for all personnel.

5.3 Annual Physical Exam

The medical examination must have been within a 12-month period prior to on-site activity and repeated annually.

5.4 Accidental/Suspected Exposure Physical

a. Following any accidental or suspected uncontrolled exposure to site contaminants, personnel should be scheduled for a special physical examination.
b. The physical examination will be specific for the contaminants and the associated target organs or physiological system.
c. _____
_____
_____
d. Questions regarding the type of physical can be directed to the employer's Directors of Health and Safety or their Corporate Physicians. See Section 10.2 for their respective phone numbers.

5.5 Contractor Physical Examination Requirements

All subcontractors entering the contamination reduction or exclusion zone will have adequate medical surveillance satisfying 29CFR 1910.120.10 (f).

5.6 Site Documentation

All personnel on-site must have the following documentation available on site:

[1] Copy of 40 hour certificate
[2] Copy of Manager's/Supervisor's 8 hour certificate
[3] Copy of 8 Hour Annual Refresher (if > 12 months since 40 hour)
[4] CPR/First Aid Certificate (annual)
[5] Respirator Fit Test (annual)
[6] Medical Fitness For Duty
[7] Memorandum of Understanding & Consent (RES only)
[8] Worksite Exposure Documentation

6.0 AIR MONITORING AND ACTION LEVELS

According to 29 CFR 1910.120 (h) Air Monitoring shall be used to identify and quantify airborne levels of hazardous substances and health hazards in order to determine the appropriate level of employee protection needed on-site.

6.1 Routine Air Monitoring Requirements

- Upon initial entry to rule out IDLH conditions;
- When the possibility of an IDLH condition or flammable atmosphere has developed;
- When work begins on a different portion of the site;
- Contaminants other than those previously identified are being handled;
- A different type of operation is initiated;
- Employees are handling leaking drums or containers or working in areas with obvious liquid contamination; and,
- During confined space work.

Air monitoring will consist at a minimum of the criteria listed below. All air monitoring data will be documented and submitted to the OSC and available in the command post site files for review by all interested persons. Air monitoring instruments will be calibrated and maintained in accordance with the manufacturer's specifications. Calibration and maintenance performed will be entered in the site log and/or instrument log book.

6.2 Site Specific Air Monitoring Requirements

INSTRUMENT	COMPOUNDS TO DETECT	FREQUENCY	COMMENTS/ ACTION LEVEL
Combustible Gas Indicator (CGI)	Explosive/ Flammable Atmospheres	Initial walkthrough/ Drum sampling	> 10% LEL
PID/FID	Organic Vapors and Gases	Continuous	Unidentified contaminants* >Bkgrnd - <1ppm over bkgrnd Level D > 1 over Bkgrnd - < 5 ppm over Bkgrnd Level C >5 over Bkgrnd - 500 ppm over Bkgrnd Level B
Asbestos/Fiber Monitoring	Asbestos	N/A	> 0.01 fibers/cc for PCM > 70 structures/mm^2 for TEM > 1% asbestos/weight bulk sample
Jerome Mercury Analyzer	Mercury Vapors	N/A	> .025 mg/m^3
Detector Tubes	Various	During Hazcatting	
Radiation Meter	Radiation	N/A	> 2 mR/hr
Oxygen Meter	Oxygen	N/A	<19.5% and >23.5% O_2

* The reading must be sustained for one (1) minute in the breathing zone.

6.3 Personnel Monitoring

Explain strategy or why not required: Not applicable

6.3.1 Sampling Methods (media type, analyses, NIOSH Method Number, etc.): N/A

6.3.2 Describe calibration procedures: N/A

6.3.3 Analytical laboratory to be used:

6.4 Noise Monitoring: [ ] Yes [X] No

Describe monitoring strategy: Ear plugs to be utilized around heavy equipment

6.5 Heat Stress Monitoring: [ ] Yes [X] No

Describe monitoring strategy: Not applicable due to weather

6.6 Perimeter: [X] Yes [ ] No

Describe: Perimeter real-time air monitoring to be conducted along fenceline during drum sampling.

Other: [ ] Yes [ ] No

Describe: _____

6.7 Name(s) of Monitoring Technician(s):
Karen Rydzewski - TAT
Donovan Robin - TAT

6.8 Location of Monitoring Records:

Copies of monitoring records will be retained in the job file upon the completion of the job. Additional copies will be maintained in the Health and Safety Department.

7.0 SITE CONTROL AND STANDARD OPERATING PROCEDURES

7.1 Work Zones

The primary purpose for site controls is to establish the hazardous area perimeter, to reduce migration of contaminants into clean areas and to prevent access or exposure to hazardous materials by unauthorized persons. At the end of each workday, the site should be secured or guarded, to prevent unauthorized entry. Site work zones will include:

7.1.1 Clean Zone/Support Zone

This uncontaminated support zone or clean zone will be the area outside the exclusion and decontamination zones and within the geographic perimeters of the site. This area is used for staging of materials, parking of vehicles, office and laboratory facilities, sanitation facilities, and receipt of deliveries. Personnel entering this zone may include delivery personnel, visitors, security guards, etc., who will not necessarily be permitted in the exclusion zone. All personnel arriving in the support zone will upon arrival, report to the command post and sign the site entry/exit log. There will be one controlled entry/exit point from the clean zone to the decontamination zone.

[1] Location of Clean Zone _____

7.1.2 Decontamination Zone

The decontamination zone will provide a location for removal of contaminated personal protective equipment and final decontamination of personnel and equipment. All personnel and equipment should exit via the decon area. A separate decontamination area will be established for heavy equipment.

[1] The decontamination zone is a buffer zone between contaminated and clean areas.
[2] Identified by yellow banner guard.
[3] Decon line is located _____

7.1.3 Exclusion Zone/Hot Zone

The exclusion zone will be the "hot-zone" or contaminated area inside the site perimeter. Entry to and exit from this zone will be made through a designated point and all personnel will be required to sign the hot zone entry/exit log located at the decon area. Appropriate warning signs to identify the exclusion zone should be posted (i.e. "DANGER - AUTHORIZED PERSONNEL ONLY", "PROTECTIVE EQUIPMENT REQUIRED BEYOND THIS POINT", etc.) Exit from the exclusion zone must be accompanied by personnel and equipment decontamination as described in Section 8.0.

[1] Will be identified by red banner guard.

[2] These areas will be defined by Caution banners (yellow)

[3] General Safety Rules for Exclusion Zone
- a. wear the appropriate level of PPE defined in plan
- b. do not remove any PPE or break the integrity to pick, scratch, or touch parts of your body
- c. no smoking, eating or drinking
- d. no horseplay
- e. no matches or lighters in this zone
- f. implement the communication and line of sight system

A map of the work zones for this site follows.

7.2 General Field Safety Rules

- All visitors must be sent to the command post and referred to the OSC.
- It is EPA policy to practice administrative hazard control for all site areas by restricting entrance to exclusion zones to essential personnel and by using operational SOPs.
- Whenever possible, avoid contact with contaminated (or potentially contaminated) surfaces. Walk around (not through) puddles and discolored surfaces. Do not kneel on the ground or set equipment on the ground. Stay away from any waste drums unless necessary. Protect equipment from contamination by bagging.
- Eating, drinking, or smoking is permitted only in designated areas in the support zone.
- Hands and face must be thoroughly washed upon leaving the decon area.
- Beards or other facial hair that interferes with respirator fit will preclude admission to the hot zone.
- All equipment must be decontaminated or discarded upon exit from the exclusion zone, as determined by the OSC or designate.
- All personnel exiting the exclusion zone must go through the decontamination procedures described in Section 8.0.
- Safety Equipment described in Section 4.0 will be required for all field personnel in the exclusion zone.
- Personnel will only travel in vehicles where individual seats (for each occupant are provided. Seat belts will be worn as required.

- Fire extinguishers will be available on site and in all areas with increased fire danger such as the refueling area.
- A minimum of two personnel will always be on site whenever heavy equipment is operated. Only necessary personnel need to be on or around heavy equipment.
- Employees will not interfere with or tamper in any way with air monitoring equipment.
- Backhoes or other equipment with booms shall not be operated within 10 feet of any electrical conductor.
- Visitor log will be maintained at the command post or with the security guard. All personnel coming on site will sign in and out on a daily basis.
- Security will be maintained at the site by closing all gates during normal work hours. The OSC will assume responsibility for personnel entering site. Site will be locked up in the evening.
- EPA OSC will allow only those individuals authorized to enter the site. If unauthorized members of the public are found on site, contact security immediately and do not leave the individual unattended.
- Visitors are not allowed in the work areas without authorization and not without appropriate levels of PPE as determined by site safety personnel. Access to the properties is restricted to the EPA and authorized representatives. Persons other than the residents must sign in at the Command Post and receive authorization to enter the site.
- Buddy System
  [1] The buddy system is mandatory at anytime that personnel are working in the exclusion zone, remote areas, on tanks, or when conditions present a risk to personnel.

  [2] A buddy system requires at least two trained/experienced people who work as a team and maintain at a minimum audible and/or visual contact while operating in the exclusion zone.
- Communication Procedures
  [1] Radios will be used for on site communications and Channel _____ will be the designated channel.
  [2] The crews should remain in constant radio or visual contact while on site.
  [3] The site evacuation signal will be 3 blasts on the air or vehicle horn.

8.0 DECONTAMINATION PROCEDURES

In general, everything that enters the exclusion zone at this site, must either be decontaminated or properly discarded upon exit from the exclusion zone. All personnel, including any state and local officials must enter and exit the hot zone through the decon area. Prior to demobilization, contaminated equipment will be decontaminated and inspected by the OSC or OSC designate before it is moved into the clean zone. Any material that is generated by decontamination procedures will be stored in a designated area in the exclusion zone until disposal arrangements are made.

All personnel must be documented on the "HOT ZONE ENTRY/EXIT LOG" when entering and exiting the exclusion zone.

NOTE: The type of decontamination solution to be used is dependent on the type of chemical hazards. The decontamination solution for this site is Alconox. Decontamination solution will be changed daily (at a minimum) and collected and stored on-site until disposal arrangements are finalized.

8.1 Procedures for Equipment Decontamination

Following decontamination and prior to exit from the hot zone, the OSC or a designated alternate, shall be responsible for insuring that the item has been sufficiently decontaminated. This inspection shall be included in the site log.

Equipment decontamination will consist of the following steps:

_____

_____

8.2 Procedure for Personnel Decontamination

This decontamination procedure applies to personnel at this site wearing Level B and C protection. These are the minimum acceptable requirements:

Station 1: Equipment Drop
Deposit equipment used on-site (tools, sampling devices and monitoring instruments, radios, etc.) on plastic drop cloths. These items must be decontaminated or discarded as waste prior to removal from the exclusion zone.

Station 2: Outer Boot and Outer Glove Wash and Rinse
Scrub outer boots, outer gloves and/or splash suit with decon- tamination solution or detergent water. Rinse off using water.

Station 3: Outer Boot and Glove Removal
Remove outer boots and gloves. If outer boots are disposable, deposit in container with plastic liner. If non-disposable, store in a clean dry place.

Station 4: Tank Change
If person leaves exclusion zone to change air tank, this is the last step in the decontamination procedure. Air tank is exchanged, new outer gloves and boot covers donned, joints taped, and person returns to hot zone.

Station 5: Outer Garment Removal
If applicable, remove SCBA back-pack and remain on air as long as possible. Remove Chemical Resistant Outer Garments and deposit in container lined with plastic. Decontaminate or dispose of splash suits as necessary.

Station 6: Respiratory Protection Removal
Remove hard-hat, face-piece, and if applicable, deposit SCBA on a clean surface. APR cartridges will be discarded as appropriate. Wash and rinse respirator at least daily. Wipe off and store respiratory gear in a clean, dry location. (See Attachment D)

Station 7: Inner Glove Removal
Remove inner gloves. Deposit in container for disposal.

Station 8: Field Wash
Thoroughly wash hands and face with soap and water. Shower as soon as possible.

Eating, drinking, chewing gum/tobacco, smoking, or any practice that increases the probability of hand to mouth transfer and/or ingestion of materials is prohibited in any areas where the possibility of contamination exists and is permitted only in the designated break area.

Personnel will not wear or bring dirty/decontaminated clothing into the break areas.

8.3 Emergency decontamination will consist of the following steps:
(Any blood contaminated material will be bag, labeled and accompany the individual to the hospital.) _____
_____

8.4 The following decontamination equipment is required:
_____
_____

8.5 Disposition of Decontamination Wastes

[1] All equipment and solvents used for decontamination shall be decontaminated or disposed of with the established waste streams.
[2] Commercial laundries or cleaning establishments that decontaminate or are used to launder contaminated clothing shall be informed of the presence and potentially harmful effects of the contaminants.
[3] _____
_____

A sketch of the decon area for this site is shown in Attachment B.

9.0 HAZARD COMMUNICATION PROGRAM

Each contractor will be responsible for maintaining a copy of their Hazardous Communication Program and MSDS' on site. The following items are specific to this job site:

9.1 Material Safety Data Sheets

[1] Material Safety Data Sheets will be maintained at the Command Post in the Health and Safety Binder.
[2] MSDS' will be available to all employees for review during the work shift.
[3] See Attachment C and/or the ERCS Health and Safety Binder.

9.2 Container Labeling

[1] All containers received on site will be inspected by the contractor using the material to ensure the following:
   a. all containers clearly labeled
   b. appropriate hazard warning
   c. name and address of the manufacturer

9.3 The following chemicals were brought to the site:

[1] Alconox
[2] Gasoline
[3] (Hazcat) Supplies
[4] Diesel Fuel
[5] Office Supplies
[6] _____

9.4 Employee Training and Information

[1] Prior to starting work, each employee will attend a health and safety orientation and will receive information and training on the following:
   a. an overview of the requirements contained in the Hazardous Communication Standard
   b. Hazardous chemicals present at the site
   c. the location and availability of the written Haz Comm Program
   d. physical and health effects of the hazardous chemicals
   e. methods of preventing or eliminating exposure
   f. emergency procedures to follow if exposed
   g. how to read labels and review MSDS' to obtain information
   h. location of MSDS file and location of hazardous chemical list

See ERCS/TAT Health and Safety Binder for Hazard Communication Program and applicable MSDS'.

10.0 EMERGENCIES/ACCIDENTS/INJURIES

It is essential that site personnel be prepared in the event of an emergency. Emergencies can take many forms; illnesses or injuries, chemical exposure, fires, explosions, spills, leaks, releases of harmful contaminants, or sudden changes in the weather. The following sections outline the general procedures for emergencies. Emergency information should be posted as appropriate.

10.1 Emergency Contacts for the MCC Site

Fire: Chicago Fire Deprtment 911

Police: Chicago Police Department 911

Sheriff: Cook County 911

Ambulance: 911

Hospital: **Cook County Hospital**
1835 West Harrison Avenue
Chicago, Illinois

Telephone: 312-633-6324 Chemical Trauma Capabilities? YES

Poison Control Center: 911

***Directions from Site to Hospital (See Map in Attachment B):**

Kostner NORTH (left) to Roosevelt Road EAST (right) to Ogden Boulevard NORTHEAST (angled left) to Harrison Avenue EAST (right). Cook County Hospital on south side of street between Wolcott and Wood.

NOTE: Maps and directions to the hospital will be posted in the office, decon trailers and decontamination area.

The route to the hospital was verified by: ALLEN FRANC on 1/4/95. Distance from site to hospital is 5 miles. Approximate driving time is 12 MINUTES. The fire, police, and hospital were notified of site operations by _____ on _____.

The following individuals have been trained in CPR and First Aid:

Mark Parquette

Karen Rydzewski

Donovan Robin

10.2 Additional Emergency Numbers

National Response Center	800-424-8802
U.S. EPA Region V - E.R. Branch	312-353-2318 (24 hr)
Center for Disease Control	404-488-4100 (24 hr)
AT&F (Explosives Information)	800-424-9555
Chemtrec	800-424-9300
State Environmental Agency (IEPA)	

Ecology & Environment, Inc. Contacts

E & E Regional Office (for this site)	312-663-9415
E & E MEDTOX Emergency Medical Hotline	501-221-0463 (24 Hr.) 904-462-3277/3281
Dr. Harbison (Home)	501-370-8263
E & E Corporate H & S - Dr. Paul Jonmaire	716-684-8060 (Home)
E & E Emergency Operations Center Hotline	716-684-8940 (24 Hr.) 716-684-8060
TAT Leader Region V - Thomas Kouris	312-663-9415

Riedel Environmental Services, Inc. Contacts

Riedel Environmental Services	800-334-0004 (24 Hr.)
Riedel Environmental Services (Chicago)	708-238-1818
Riedel Environmental Services (St. Louis)	314-532-7660
RES Corporate H & S - ~~Mike Amen~~ MARGARET CUNNINGHAM	800-334-0004

EPA

Federal Occupational Health Unit	312-353-0379

10.3 Emergency Equipment Available On-Site

Communications Equipment Location

Public Telephones: _____

Private Telephones: _____

Mobile Telephones: _____

Two-Way Radios: _____

Emergency Alarms/Horns: _____

Medical Equipment

First Aid Kits: _____

Inspection Date: _____ By: _____

Stretcher/Backboard: _____

Eye Wash Station: _____
(within 100 feet of hazard zone)

Safety Shower: _____

Fire-Fighting Equipment

Fire Extinguishers: _____

Inspection Date: _____ By: _____

Other: _____

Spill or Leak Equipment

Absorbent Boom/Pads: _____

Dry Absorbent: _____

Additional Emergency Equipment

_____

_____

10.4 Accident Reporting/Investigations (See Attachment F for proper procedures.)

11.0 EMERGENCY RESPONSE CONTINGENCY PLAN

11.1 Project Personnel Responsibilities During Emergencies

ON-SCENE COORDINATOR (OSC)

As the administrator of the project, the OSC has primary responsibility for responding to and correcting emergency situations. The OSC will:

- Take appropriate measures to protect personnel including: withdrawal from the exclusion zone, total evacuation and securing of the site or up-grading or down-grading the level of protective clothing and respiratory protection.
- Take appropriate measures to protect the public and the environment including isolating and securing the site, preventing run-off to surface waters and ending or controlling the emergency to the extent possible.
- Ensure that appropriate Federal, State and local agencies are informed, and emergency response plans are coordinated. In the event of fire or explosion, the local fire department should be summoned immediately. In the event of an air release of toxic materials, the local authorities should be informed in order to assess the need for evacuation. In the event of a spill, sanitary districts and drinking water systems may need to be alerted.
- Ensure that appropriate decon treatment or testing for exposed or injured personnel is obtained.
- Determine the cause of the incident and make recommendations to prevent the recurrence.
- Ensure that all required reports have been prepared.

RESPONSE MANAGER (RM)

The RM must immediately report emergency situations to the OSC, take appropriate measures to protect site personnel and assist the OSC as necessary in responding to and mitigating the emergency situation.

TECHNICAL ASSISTANCE TEAM (TAT)

The TAT must immediately report emergency situations to the OSC, take appropriate measures to protect site personnel and assist the OSC as necessary.

11.2 Medical Emergencies:

Any person who becomes ill or injured in the exclusion zone must be decontaminated to the maximum extent possible when practical. If the injury or illness is minor, full decontamination should be completed and first aid administered prior to transport. If the patient's condition is serious, at least partial decontamination should be completed (i.e., complete disrobing of the victim and redressing in clean coveralls or wrapping in a blanket.) First aid should be administered while awaiting an ambulance or paramedics. All injuries and illnesses must immediately be reported to the OSC.

Any person transporting an injured/exposed person to a clinic or hospital for treatment should take with them directions to the hospital and information on the chemical(s) they may have been exposed to. This information is included in Table 2.3. Any vehicle used to transport contaminated personnel, will be cleaned or decontaminated as necessary.

11.3 Fire or Explosion:

In the event of a fire or explosion, the local fire department should be summoned immediately. Upon their arrival the OSC or designated alternate will advise the fire commander of the location, nature and identification of the hazardous materials on- site.

If it is safe to do so, site personnel may:

- Use fire fighting equipment available on site.
- Remove or isolate flammable or other hazardous materials which may contribute to the fire.

11.4 Spills, Leaks or Releases:

In the event of a spill or a leak, site personnel will:

- Locate the source of the spillage and stop the flow if it can be done safely.
- Begin containment and recovery of the spilled materials.

11.5 Evacuation Routes and Resources:

Evacuation routes have been established by work area locations for this site. All buildings and outside work areas have been provided with two designated exit points. Evacuation should be conducted immediately, without regard for equipment under conditions of extreme emergency. See site map for evacuation routes.

- Evacuation notification will be three blasts on an air horn, vehicle horn, or by verbal communication via radio.
- Keep upwind of smoke, vapors or spill location.
- Exit through the decontamination corridor if possible.
- If evacuation is not via the decontamination corridor, site personnel should remove contaminated clothing once they are in a location of safety and leave it near the exclusion zone or in a safe place.
- The OSC will conduct a head count to insure all personnel have been evacuated safely.
- In the event that emergency site evacuation is necessary, all personnel are to:
  1. Escape the emergency situation;
  2. Decontaminate to the maximum extent practical; and,
  3. Meet at the U.S. EPA command post.
- In the event that the U.S. EPA command post is no longer in a safe zone, meet: _____.

12.0 CONFINED SPACE

A confined space is defined as a space or work area not designed or intended for normal human occupancy, having limited means of access and poor natural ventilation, and or any structure, including buildings or rooms which have limited means of egress. Examples include tanks, vats, and basements. Confined spaces identified at this site are listed below. If a confined space entry is conducted, it will be done in accordance with procedures presented in Attachment _____.

Type of Confined Space	Location On-Site	Comments

ATTACHMENT Z
SITE SAFETY PLAN
ACKNOWLEDGMENT FORM

SITE SAFETY PLAN ACKNOWLEDGMENT FORM

I have been informed and understand and will abide by the procedures set forth in the Safety and Health Plan and Amendments for the MCC Construction site.

Printed Name	Signature	Representing	Date
Mark Pouquette	Mark Pouquette	RES	1-4-95
BRAD STEMPLE	Brad Stemple	USEPA	1-4-95
Karen Rudzewski	Karen Rudzewski	E+E/TAT	1-4-95
JOE PAYTOSH	Joe Paytosh	RES	1-4-95
Pete Kober	[illegible]	RES	1-4-95
TED PIETRON	Ted Pietron	RES	1-4-95
Mark Dougherty	Mark Dougherty	RES	1-4-95
Donovan Robins	Donna Robins	E&E/TAT	1-4-95
Freddie Stanley	Freddie Stanley	RES	1-7-95
Thomas Harper	Thomas Harper	RES	2-7-95